

CLAIMS

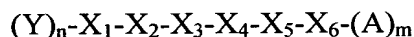
1. An anti-inflammatory compound comprising the structure:



- 5 wherein X_a is a membrane translocation domain comprising from 6 to 15 amino acid residues; and X_b is a NEMO binding sequence.

2. The anti-inflammatory compound of claim 1, further comprising a
 10 modifying group.

3. The anti-inflammatory compound of claim 1, wherein X_b consists of the
 following structure:



15 wherein

n and m are each, independently, 0 or 1;

A and Y each comprises from 1 to about 3 amino acid residues;

X_1 is L, A, I or nor-leucine (Nle);

- 20 X_2 is D, E, N, Q, homoserine (Hser) or 2-ketopropylalanine (2-ketopropyl-A);

X_3 is W, F Y, 4-biphenyl-alanine (Bpa), homophenylalanine (Hphe), 2-Naphthylalanine (2-Nal), 1-Naphthylalanine (1-Nal), or cyclohexyl-alanine (Cha);

X_4 is S, A, E, L, T, nor-leucine (Nle), or homoserine (Hser);

- 25 X_5 is W, H, homophenylalanine (Hphe), 2-Naphthylalanine (2-Nal), 1-Naphthylalanine (1-Nal), O-benzyl serine (SeroBn), or 3-Pyridylalanine (3-Pal); and

X_6 is L, A, I, or nor-leucine (Nle).

4. The anti-inflammatory compound of claim 1, wherein n is 1 and Y is the
 30 sequence TA.

5. The anti-inflammatory compound of claim 1, wherein m is 1 and A is the
 sequence QTE.

6. The anti-inflammatory compound of claim 1, wherein X_b is a sequence
 35 selected from the group consisting of TALDWSWLQTE; LDWSWLQTE;
 TALDWSWL; ALDWSWLQTE; LDWSWLQTE; LDWSWL; TALDWSWLQT;
 TALDWSWLQ; ALDWSWLQT; LDWSWLQ; LDWSWLQT; ADWSWL;
 LDWSWA; ADWSWA; LDFSWL; LDYSWL; LDWAWL; LDWEWL;

TAADWSWLQTE; ADWSWLQTE; TAADWSWL; AADWSWLQTE;
 ADWSWLQTE; ADWSWL; TAADWSWLQT; TAADWSWLQ; AADWSWLQT;
 ADWSWLQ; ADWSWLQT; ALDWSWAQTE; LDWSWAQTE; TALDWSWA;
 ALDWSWAQTE; LDWSWAQTE; LDWSWA; TALDWSWAQT; TALDWSWAQ;
 5 ALDWSWAQT; LDWSWAQ; LDWSWAQT; TAADWSWAQTE; ADWSWAQTE;
 TAADWSWA; AADWSWAQTE; ADWSWAQTE; ADWSWA; TAADWSWAQT;
 TAADWSWAQ; AADWSWAQT; ADWSWAQ; ADWSWAQT; TALDFS WLQTE;
 LDFS WLQTE; TALDFS WL; ALDFS WLQTE; LDFS WLQTE; LDFS WL;
 TALDFS WLQT; TALDFS WLQ; ALDFS WLQT; LDFS WLQ; LDFS WLQT;
 10 TALDYS WLQTE; LDYS WLQTE; TALDYS WL; ALDYS WLQTE; LDYS WLQTE;
 LDYS WL; TALDYS WLQT; TALDYS WLQ; ALDYS WLQT; LDYS WLQ;
 LDYS WLQT; TALDWAWLQTE; LDWAWLQTE; TALDWAWL; ALDWAWLQTE;
 LDWAWLQTE; LDWAWL; TALDWAWLQT; TALDWAWLQ; ALDWAWLQT;
 LDWAWLQ; LDWAWLQT; TALDWEWLQTE; LDWEWLQTE; TALDWEWL;
 15 ALDWEWLQTE; LDWEWLQTE; LDWEWL; TALDWEWLQT; TALDWEWLQ;
 ALDWEWLQT; LDWEWLQ; and LDWEWLQT.

7. The anti-inflammatory compound of claim 1, wherein X_a consists of 6-12 amino acid residues.

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8. The anti-inflammatory compound of claim 1, wherein X_a consists of 6-10 amino acid residues.

9. The anti-inflammatory compound of claim 1, wherein X_a comprises at least five basic amino acid residues.

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10. The anti-inflammatory compound of claim 1, wherein X_a comprises at least five amino acid residues independently selected from L-arginine, D-arginine, L-lysine and D-lysine.

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11. The anti-inflammatory compound of claim 1, wherein X_a is selected from the group consisting of RRMKWKK; YGRKKRRQRRR; ygrkkrrqrrr; YARKARRQARR; yarkarrqarr; YARAARRAARR; yaraarraarr; rrmkwkk, RRRRRR, RRRRRRR, RRRRRRRR, RRRRRRRRR, RRRRRRRRRR, RRRRRRRRRRR, .
 35 rrrrrr, rrrrrrr, rrrrrrrr, rrrrrrrrr, rrrrrrrrrr, and rrrrrrrrrrr.

12. An anti-inflammatory compound comprising an amino acid sequence selected from the group consisting of: RRMKWKKTALDWSWLQTE;

rrmkwkkTALDWSWLQTE; YGRKKRRQRRRTALDWSWLQTE;
 ygrkkrrqrrrTALDWSWLQTE; rrrrrrrTALDWSWLQTE;
 RRRRRRRRTALDWSWLQTE; YARKARRQARRTALDWSWLQTE;
 yarkarrqarrTALDWSWLQTE YARAARRAARRTALDWSWLQTE;
 5 yaraarraarrTALDWSWLQTE YGRKKRRQRRRLDWSWL; ygrkkrrqrrrLDWSWL;
 RRMKWKKLDWSWL; rrmkwkkLDWSWL; rrrrrrrLDWSWL;
 YARAARRAARRLDWSWL; yaraarraarrLDWSWL; and RRRRRRRRLDWSWL.

13. An anti-inflammatory compound having a structure selected from the
 10 group consisting of:

H-RRMKWKKTALDWSWLQTE-NH₂;
 H-YGRKKRRQRRRTALDWSWLQTE-NH₂;

15 H-rrrrrrrTALDWSWLQTE-NH₂;
 H-YARKARRQARRTALDWSWLQTE-NH₂;
 H-YARAARRAARRTALDWSWLQTE-NH₂;
 H-RRMKWKKLDWSWL-NH₂;
 H-rrmkwkkLDWSWL-NH₂;
 H-rrrrrrrLDWSWL-NH₂;
 H-YARAARRAARRLDWSWL-NH₂;
 20 H-yaraarraarrLDWSWL-NH₂; and
 H-YGRKKRRQRRRLDWSWL- NH₂.